COM-208: Computer Networks - Quiz 2 (Solutions)

Note: Solutions correspond to version A of the quiz (version B was identical to A, only differing in the order of questions/answers.)

1. We say that TCP is a "connection-oriented" protocol because:

    (a) Every packet sent by a TCP sender is delivered to the intended TCP receiver with probability 100%.
    (b) A TCP sender and receiver are always connected through packet switches that use connection switching.
    (c) A TCP sender and receiver maintain state about each other.

2. Assuming no caching, the amount of time it takes for a web client to download a web page from a web server is

    (a) 1 round-trip time (RTT) between the client and server.
    (b) at least 2 RTTs between the client and server.
    (c) at most 2 RTTs between the client and server.

3. Cookies enable

    (a) a packet switch to link subsequent packets to the same source IP address.
    (b) a web server to link subsequent HTTP requests to the same web client.
    (c) a proxy web server to decide whether cached data is stale.

4. Proxy web servers do not cache small files because

    (a) web clients can download small files very quickly.
    (b) the overhead of checking whether the file is stale cancels out the benefit of caching.
    (c) both of the above.

5. Domain Name Service (DNS) translates

    (a) DNS names to process addresses.
    (b) DNS names to IP addresses.
    (c) IP addresses to MAC addresses.

6. Every Internet end-system must know the IP address of at least one

    (a) DNS server
    (b) root DNS server.
    (c) authoritative DNS server for each domain it wants to communicate with.

7. When you visit a web page, the <u>minimum</u> number of requests to DNS servers that take place as a result is

    (a) 4.
    (b) 1.
    (c) 0.

8. The DNS root servers come under a massive denial-of-service (DoS) attack. As a result, an Internet end-system

    (a) cannot reach any other Internet end-system.
    (b) can only reach end-systems it communicated with recently.
    (c) is not affected at all by the attack.

9. When we say that peer-to-peer file distribution "scales better" than client-server, we mean that

    (a) file distribution time increases more slowly with the number of downloaders
    (b) file distribution time increases more slowly with the number of involved packet switches.
    (c) file distribution time decreases with the number of downloaders.

10. Peer-to-peer file distribution systems use distributed hash tables (DHTs) to

    (a) store content files.
    (b) store illegal content files.
    (c) map file IDs to file location information.